

File #: M / / -
Date Approved: / /
Bond Adjustment (\$) _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

NOTICE OF INTENTION TO REVISE LARGE MINING OPERATIONS

When an operator intends to revise his mining operation, a Notice of Intention to Revise Mining Operations shall be filed with the Division. The notice must include all information concerning the revision that would have been required in the original Notice of Intention.

"REVISION" means a means a change to the approved Notice of Intention to Conduct Mining Operations, which will increase the amount of land affected or alter the location and type of onsite surface facilities such that the nature of the reclamation plan will differ substantially from the approved Notice of Intention.

"AMENDMENT" is an insignificant change in the approved notice of intention.

Interpretation of the significance of a change will be made by the Division on a case-by-case-basis.

0207R

RECEIVED

MAR 15 1991

DIVISION OF
OIL GAS & MINING

RECEIVED March 15, 1991

1. Name of Operator/Applicant: JUMBO MINING COMPANY
2. Address: 6305 FERN SPRING COVE
AUSTIN, TEXAS 78730
3. Phone #: (512) 346-4537
4. Name of Operation/Project: DRUM MINE--NEW HEAP
5. Previously Assigned File #
(from original Notice of Intention): M/027/007
6. Location of Proposed activities

County MILLARD
Township 15S Range 10W Section(s) E $\frac{1}{2}$ W $\frac{1}{2}$ Sec. 7
(Identify to 1/4 1/4 section)

7. Description of Proposed Activities

Clearly describe all pertinent details of the proposed change, include appropriate references to previously submitted materials (with dates), give estimated date of starting any proposed work, etc.):

A NEW HEAP WILL BE CONSTRUCTED WEST OF OLD HEAP #2 AND WEST AND NORTH OF OLD HEAP #3. THE HEAP IS DESIGNED TO HOLD UP TO 800,000 TONS OF ORE. STARTUP DATE IS SCHEDULED IN MAY-JUNE, 1991

SEE ADDITIONAL SHEETS AND MAPS

NOTE: Please attach additional sheets and maps as necessary. Label and reference attachments accordingly.

8. Proposed Surface Disturbance

Size of proposed ^{new} surface disturbance: 7.30 acres
Size of total activities: 15.99 acres
Are the proposed activities within the disturbed area of the approved notice of intention? YES--PARTIALLY

9. Reclamation Surety

Will the proposed activities change the amount of work required to reclaim the site? XX YES NO

If yes, please attach a reclamation cost estimate outlining these changes. This information will assist the Division in determining a reasonable surety amount.

10. Signature Requirement

I hereby certify that the foregoing is true and correct.

Signature of Operator:

David Hartshorn

Name (Typed or Print):

DAVID HARTSHORN

Title of Operator:

PROJECT MANAGER

Date:

3/12/91

ADDITIONAL INFORMATION

R613-004-104 OPERATOR AND MINERAL OWNERS

- (1) Jumbo Mining 6305 Fern Spring Cove Austin, Texas 78730
512-346-4537
- (2) YC claims owned by Jumbo Mining; Ritz claims owned by
Frank Law 75W Main Delta, Utah 84624 (801-864-2027)
- (3) BLM'S UMC #
YC-14 224619
YC-15 224620
YC-18 224623
Ritz 14 224215
Ritz 16 224217

R613-004-105 MAPS, DRAWINGS AND PHOTOGRAPHS

1. Topographic base maps of varying scales are shown on the following maps:
 - 1.11 Property boundaries of surface ownership on Map R613-004-105.1.11 "SURFACE OWNERSHIP".
 - 1.12 Springs, roads surface facilities and drainage on Map R613-004-105.1; monitoring wells on Map R613-004-105.3.16A.
 - 1.13 Access route on map R613-004-105.1 "TOPO BASE MAP".
 - 1.14 Previously disturbed areas on map R613-004-105.1.14.
2. Surface facilities map (1"-200') shown on the following:
 - 2.11 Proposed surface facilities including stockpile and crushing area, new pad area, soil stockpile area, new roads and diversion ditches on Map R613-004-105-2.
 - 2.12 Area and location (showing border) of new acreage to be disturbed on Map R613-004-105.2.12 "NEW ACREAGE TO BE DISTURBED".
3. Additional maps or information required by the Division:
 - 3.11 No slopes will be left steeper than 2h:1v. 3 to 1 ?
 - 3.12 Plans and cross-sections of the new pad are currently being constructed by CBC Enviro Engineering of Salt Lake and a copy will be submitted to the Division upon completion.
 - 3.13 Solution ponds will be the same (already permitted by the Division).
 - 3.14 The Diversion ditches shown on the various maps will remain open for postmining drainage.

NEEDED

DETAILS? X-SECTIONS?

3.15 Diversion ditches shown on Map R613-004-105-2 "SURFACE FACILITIES MAP" are the only new addition to the hydro-logic design

DETAILS?

3.16 Baseline information maps submitted are:

Map R613-004-105.3.16 SOILS

Map R613-004-105.3.16(A) "BASELINE INFORMATION MAP" showing watershed area, perched aquifer and monitoring wells

Map R613-004-105.3.16(B) "GEOLOGY"

3.17 Reclamation activities and treatment map on Map R613-004-105.3.17 "RECLAMATION ACTIVITIES AND TREATMENT MAP"

4. Photographs are submitted to show the area to be affected.

R613-004-106 OPERATION PLAN

1. Type of mineral to be mined--GOLD
2. Ore will be mined from the existing permitted pits, crushed to 1" nominal, stacked in 10 foot lifts on the new pad using radial stackers and front end loaders and sprinkled with a weak cyanide solution. Pad construction and monitoring will be under the strict regulations of the Bureau of Water Pollution Control.
3. Estimated new acreage to be disturbed will be 7.3 acres; total activities acreage will be 15.99 acres.
4. The type of ore to be placed on the new pad will be jasperoid and silicified limestone/shale (oxidized rock only).
5. The type of soil present at the site is typical arid climate soil--poorly developed (mainly C and D horizons). The location (and depth) of soil is shown on Map R613-004-105.3.16 "SOILS". The amount of soil (greater than 6" deep) that will be stockpiled for later redepositing is estimated to be 15,606 cubic yards).
6. Stockpile areas are in locations away from any drainage pattern. Soils will be redeposited using front end loaders and graders.
7. Vegetative communities will be the same as current permitted areas.
8. The depth to ground water is estimated to be 1465'. A perched water table which is confined to the rhyodacite lies beneath the new heap area (depth to water ranges from 10 to 50') and is carefully being monitored and tested for the Bureau of Water Pollution Control. The geologic setting consists of a rhyodacite flow (up to 250' thick) underlain by a westernly tilt-block of limestone, shales and thick basal quartzites.
9. The proposed location of the new pad is shown on the various maps.

HOW ARE WASTE MTLs BEING HANDLED?

SITE? % FUMES?

How was soil determined?

depth needs information provided?

R613-004-107 OPERATION PRACTICES

1. Public Safety and Welfare
 - 1.11 No shafts or tunnels exist within the area;
 - 1.12 All trash, debris, scrap metal and wood will be removed. *WHERE TO?*
 - 1.13 With the exception of monitoring holes, all drill holes will be plugged in accordance with Rule R613-004-108.
 - 1.14 Warning signs will be posted.
 - 1.15 The new heap will be fenced. *(how?)*
2. No major natural channels of drainage will be affected. The watershed surrounding the area is small. Diversion ditches will be placed upslope of the heap. *(how sized?)*
3. Since the area is near the top of drainage, erosion will occur only from rainfall directly onto the heap. The heap and ponds are designed to control the 100 year rain. After mining is completed, the heap will be regraded, scarified after soil is replaced and reseeded in order to minimize erosion. *neutralized??*
4. All cyanide will be used during operation or removed after mining terminates.
5. All soil greater than 6" thick will be removed and stockpiled in areas protected from surface runoff. *How protected?*
6. If possible, any areas (e.g. crusher area) will be reclaimed concurrently if they are no longer needed.

R613-004-108 HOLE PLUGGING REQUIREMENTS

All drill holes will be plugged according to this rule unless these holes are to remain open for monitoring purposes (required by the Bureau of Water Pollution Control).

R613-004-109 IMPACT ASSESSMENT

1. The heap will be constructed and approved by the Dept. of Health to contain all solution in a closed system--zero discharge to groundwater. *or surface H₂O?*
2. No state or federal endangered species occur in the area. *NEED TO VERIFY AMOUNT.*
3. Any salvageable soil (approx. 15,600 yards) will be stockpiled for later distribution after completion of mining. *or just where > 6"??*
4. The new heap will be constructed to minimize erosion during operation and will be stabilized after mining. An air quality permit from the Dept. of Health has already been obtained in order to minimized air pollution. Public health and safety will be in accordance with MSHA regulations.

R613-004-110 RECLAMATION PLAN

1. Current land use is mining and postmining land use will be seasonal sheep and wildlife grazing. *neutralized*
2. Roads, soil stockpile and crusher areas will be scarified and reseeded. The new heap area will be regraded, covered to a uniform depth with the stockpiled soil, scarified and reseeded. Diversion ditches will remain open. *disposed*
3. All equipment will be removed from the area. The heap and stockpile areas will be reclaimed in order to support the postmining land use. The monitoring wells will remain open as long as required by the Bureau of Water Pollution Control. *pipes, etc.?*
4. Cyanide will be used during operation or removed afterwards. No deleterious or acid-forming materials will be generated. *you determined?*
5. The planting program will be the same as the existing permit. *reference same*

R613-004-111 RECLAMATION PRACTICES

1. Public safety and Welfare
 - 1.11 No shafts or tunnels occur in the area.
 - 1.12 All trash, scrap metal and woodm equipment, debris and other materials incident to mining will be removed. *if debris?*
 - 1.13 All drill holes other than monitoring holes will be plugged as set forth in Rule R613-004-108.
 - 1.14 Warning signs will be posted. *(where?)*
 - 1.15 The new heap will be fenced. *(design?)*
2. No natural drainages will be affected.
3. The new heap will be constructed and reclaimed as stated above in order to minimized erosion and control all runoff in the closed system.
4. All deleterious materials will be used, neutralized or removed from the property after completion.
5. The area will be left in a condition suitable for its post-mining use.
6. The slopes of the heap will be constructed and/or regraded to a stable slope in order to minimize safety hazards and erosion while providing for successful revegetation. *3:1 (??)*
7. No highwalls will exist. *(around heap? what about pits?)*
8. The pad and new roads will be reclaimed to a suitable condition for continuing use.
9. No dams or impoundments will be constructed in this admendment.

10. No trenches or pits will be made.
11. All equipment and structures will be removed. *howhere?*
12. The stockpiled soil will be replaced in order to minimize erosion and promote revegetation. *(at what average depth)? Soil balance?*
13. Revegetation will be the same as the existing permit. *again, need to reference.*

R613-004-112 VARIANCE

No variance is requested.

R613-004-113 SURETY

1. The reclamation surety will be provided in the same manner as before. *(more T-notes???)*
3. The following is a cost estimate to reclaim the 7.30 acres to be disturbed as well as for additional work needed on previously disturbed (e.g. regrading and contouring the east side of the new heap which should be in an area already under bond for scarifying and reseeding):

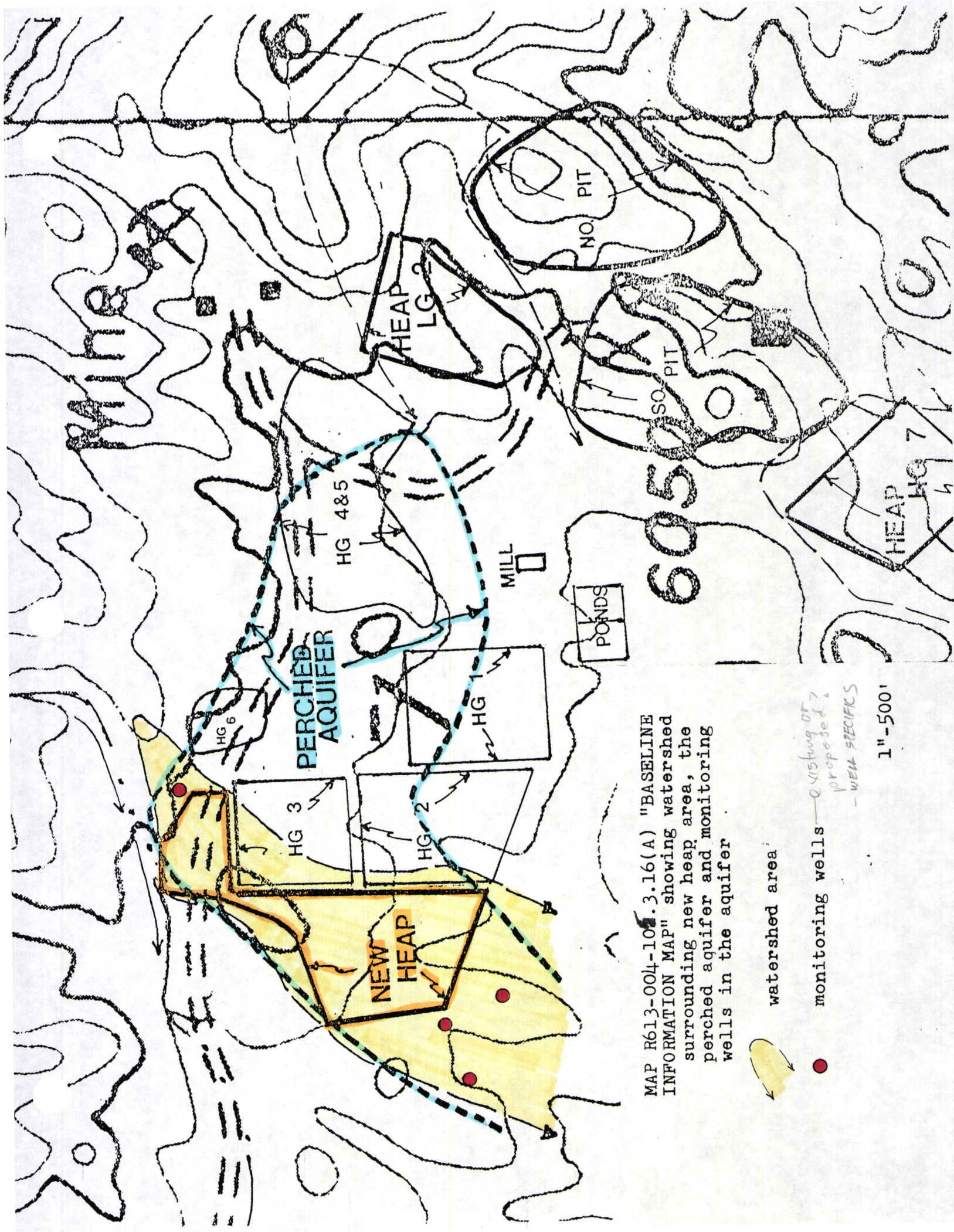
<u>DESCRIPTION</u>	<u>AMOUNT</u>	<u>\$/UNIT</u>	<u>COST-\$</u>
Ripping new roads	0.72 Acres	545	293
Contouring and regrading heap sides <i>(to a 2:1 ???)</i> <i>or 3:1</i>	7.91 Acres	394	3,116
Spread topsoil on heap	15,606 CY	0.68	10,612
Clean up trash	15.99 Acres	0.47	752
Scarify and seed	7.30 Acres	286	2,088
Construct additional fence	1200 Feet	1.00 <i>??</i>	1,200
<u>TOTAL</u>			18,061

*Nothing for neutralizing heap.
Monitoring of water.*

DRUM MINE



MAP R613-004-105.1 TOPOGRAPHIC BASE MAP
Showing access route, Busby Spring(only surface
water in area), drainage, surface facilities and
other areas previously disturbed



MAP R613-004-104.3.16(A) "BASELINE INFORMATION MAP" showing watershed surrounding new heap area, the perched aquifer and monitoring wells in the aquifer

- watershed area
- monitoring wells — existing or proposed — WELL SPECIFICS
- 1" = 500'

Map R613-004-105
 .3.16 SOILS

- less than 6"
- 6-8" 2359yds³
- 8-10" 4022yds³
- 10-12" 5052yds³
- 12-14" 4173yds³

TOTAL 15606yds³

1"-200'

INSERT MAPS

... 004-105.1.14

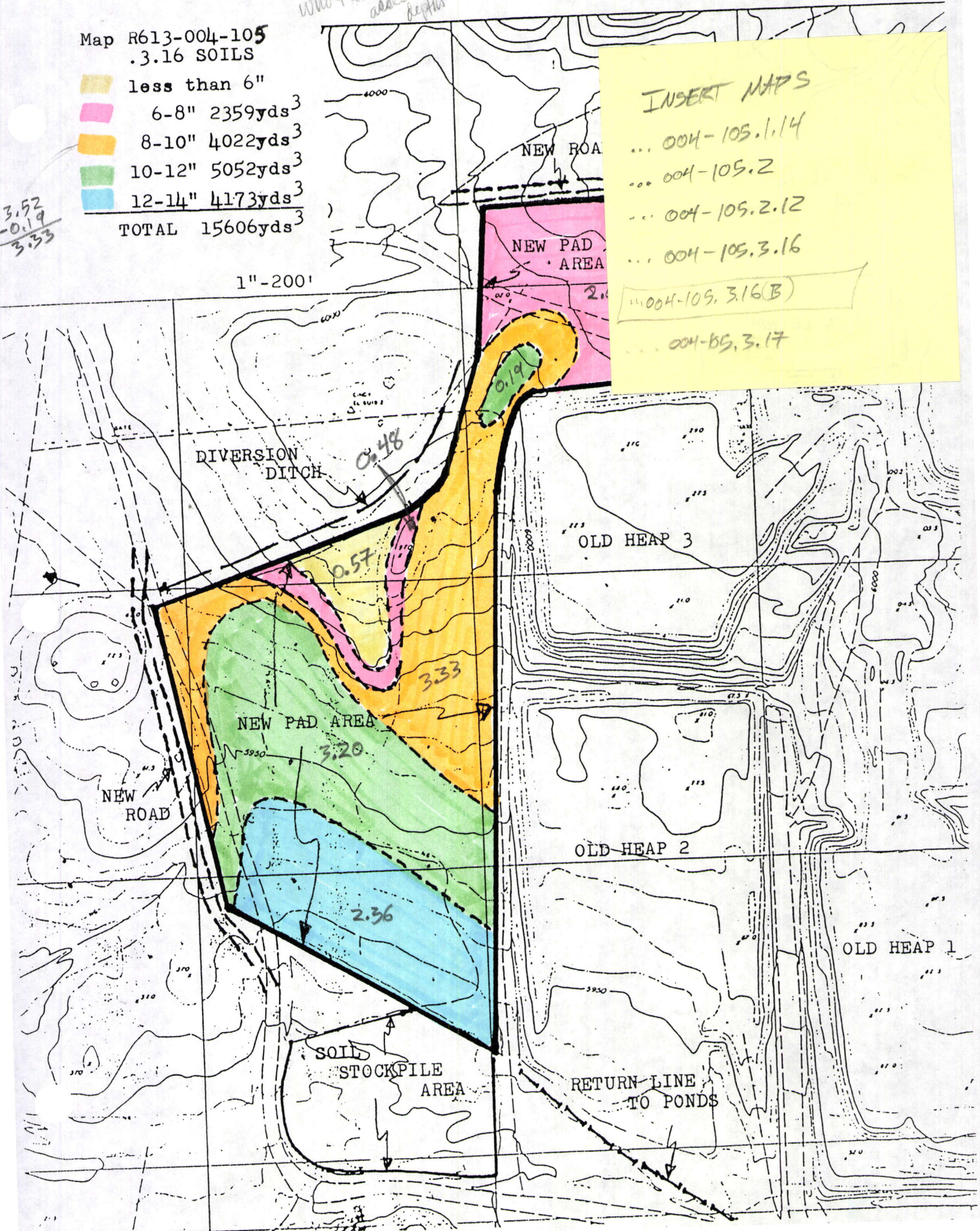
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... 004-105.2.12

... 004-105.3.16

... 004-105.3.16(B)

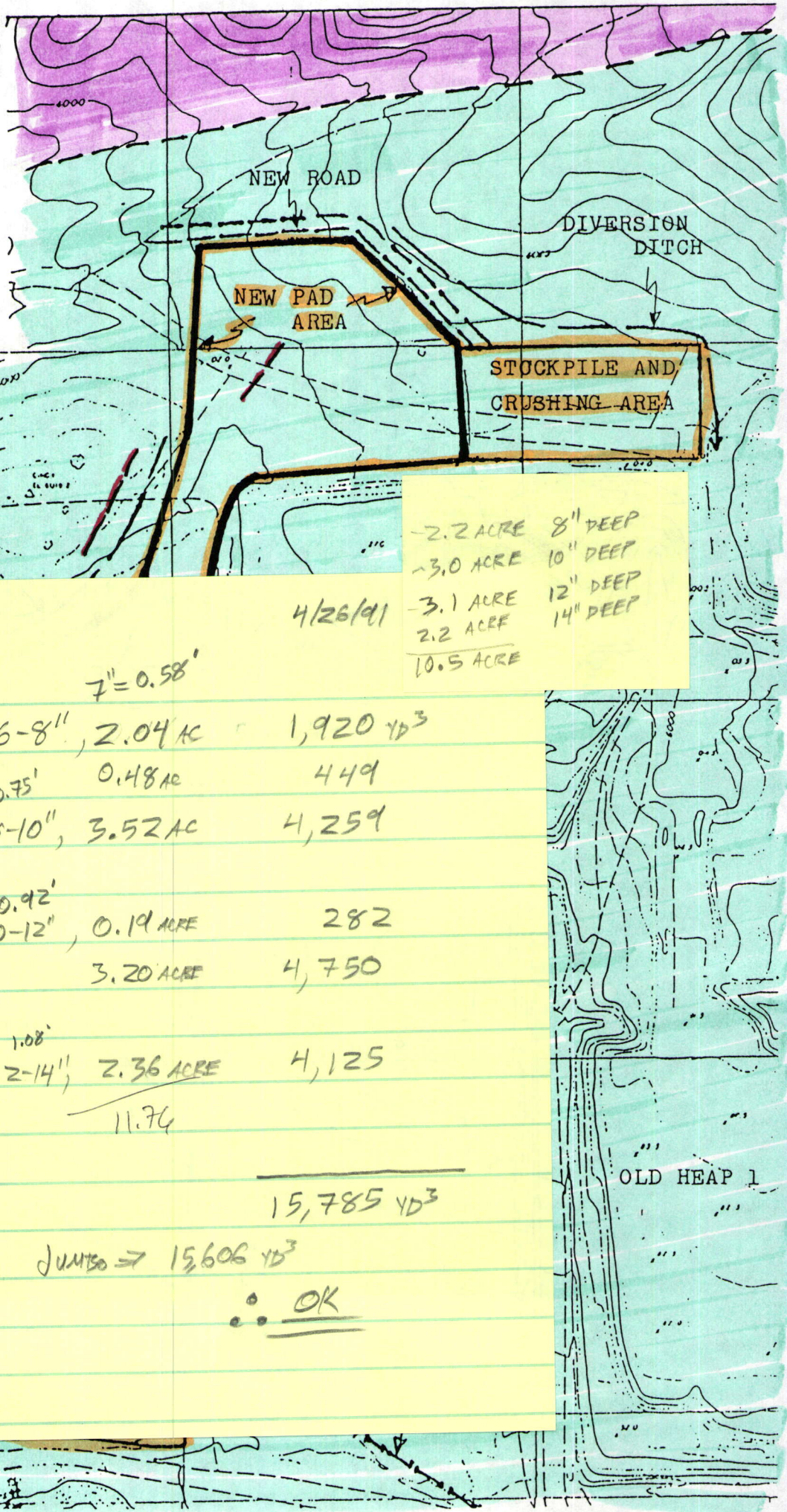
... 004-65.3.17



MAP R613-004-105.
3.16 (B) "GEOLOGY"

- DRUM MTN.
RHYODACITE
- LIMESTONE
- FRACTURE (or
JOINTING)

1"=200'



4/26/91

-2.2 ACRE	8" DEEP
-3.0 ACRE	10" DEEP
-3.1 ACRE	12" DEEP
2.2 ACRE	14" DEEP
<hr/>	
10.5 ACRE	

$7" = 0.58'$

6-8"	2.04 AC	1,920 yd ³
0.75'	0.48 AC	449
8-10"	3.52 AC	4,259
0.92'		
10-12"	0.19 AC	282
3.20 AC		4,750
1.08'		
12-14"	2.36 AC	4,125
<hr/>		
11.76		
<hr/>		
		15,785 yd ³
<hr/>		
Jumbo	15,606 yd ³	

OK

MAP R613-004-105.
3.17 "RECLAMATION
ACTIVITIES AND
TREATMENT MAP"

1"-200'

ROAD WILL BE SCARIFIED
AND RESEDED

STOCKPILE AND
CRUSHER AREA
WILL BE SCARI-
FIED AND SEEDED

DIVERSION DITCH
TO REMAIN OPEN

PAD AREA WILL BE
REGRADED, COVERED
TO A UNIFORM DEPTH
WITH THE STOCKPILED
SOIL, SCARIFIED AND
RESEDED

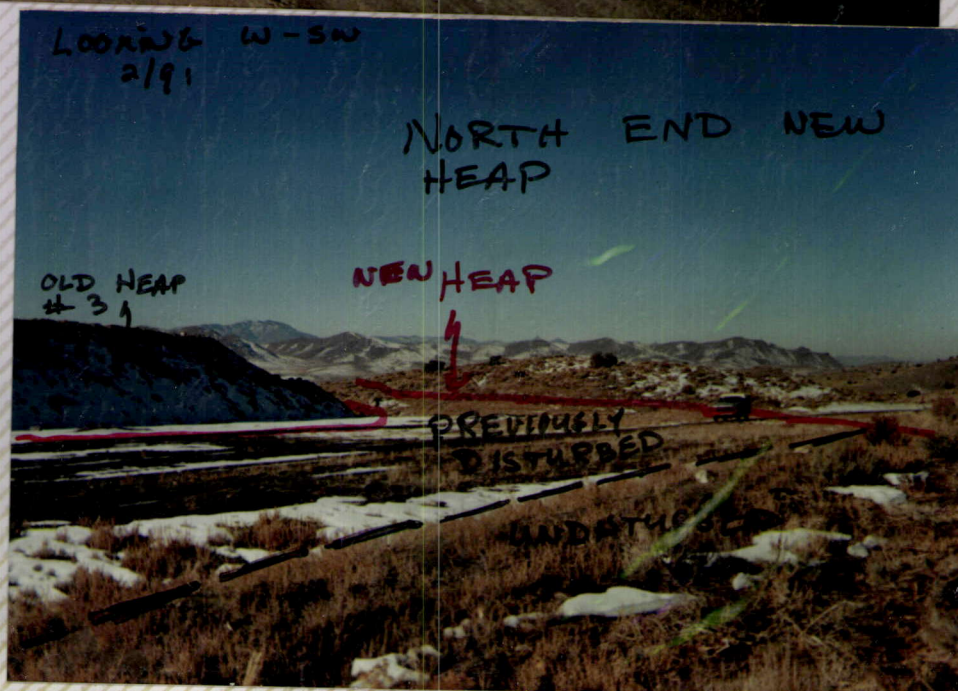
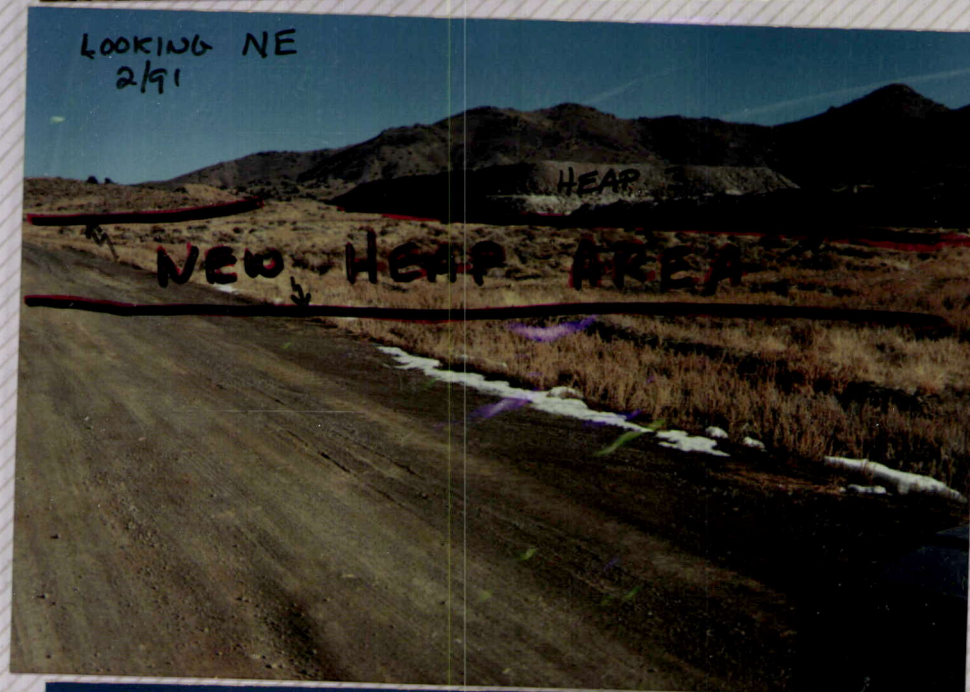
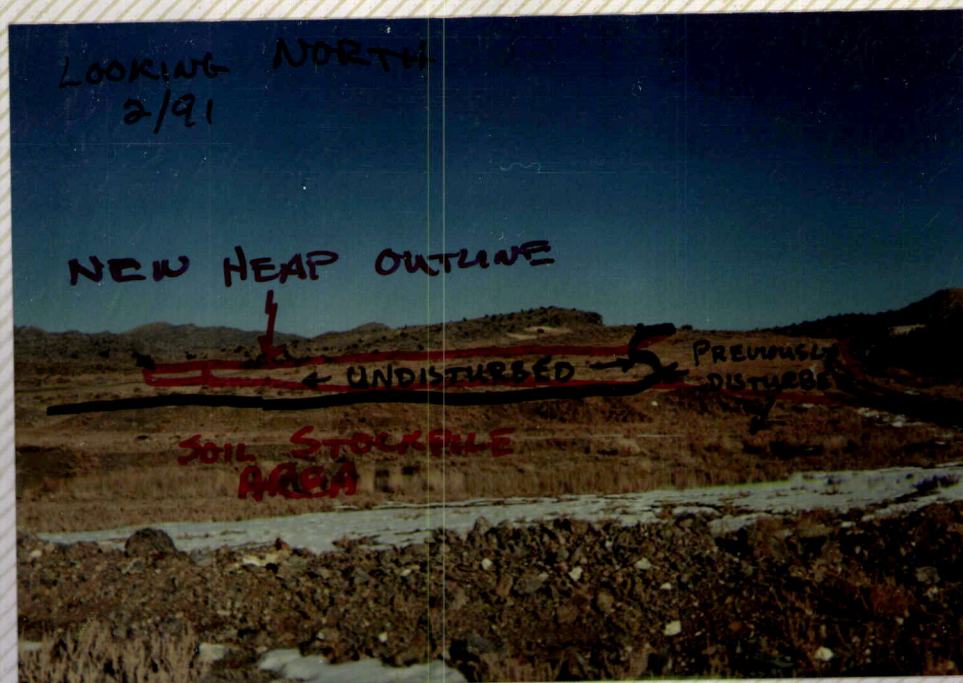
12.04 AC

ROAD TO BE
SCARIFIED
AND RESEDED

SOIL STOCKPILE
AREA WILL BE
SCARIFIED AND
RESEDED

2.07 AC

1.27 AC



MAP R613-004-105

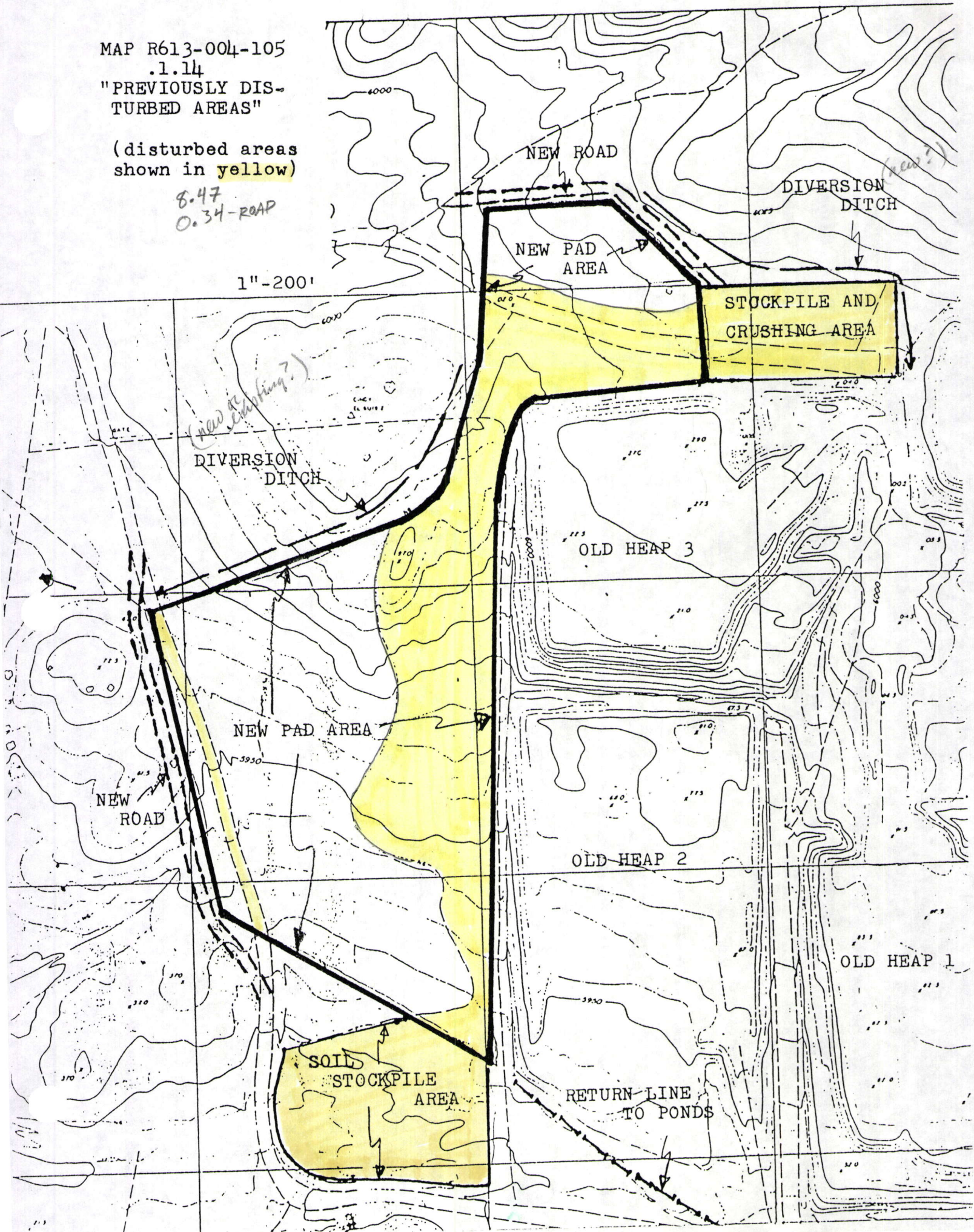
.1.14

"PREVIOUSLY DIS-
TURBED AREAS"

(disturbed areas
shown in yellow)

8.47
0.34-ROAD

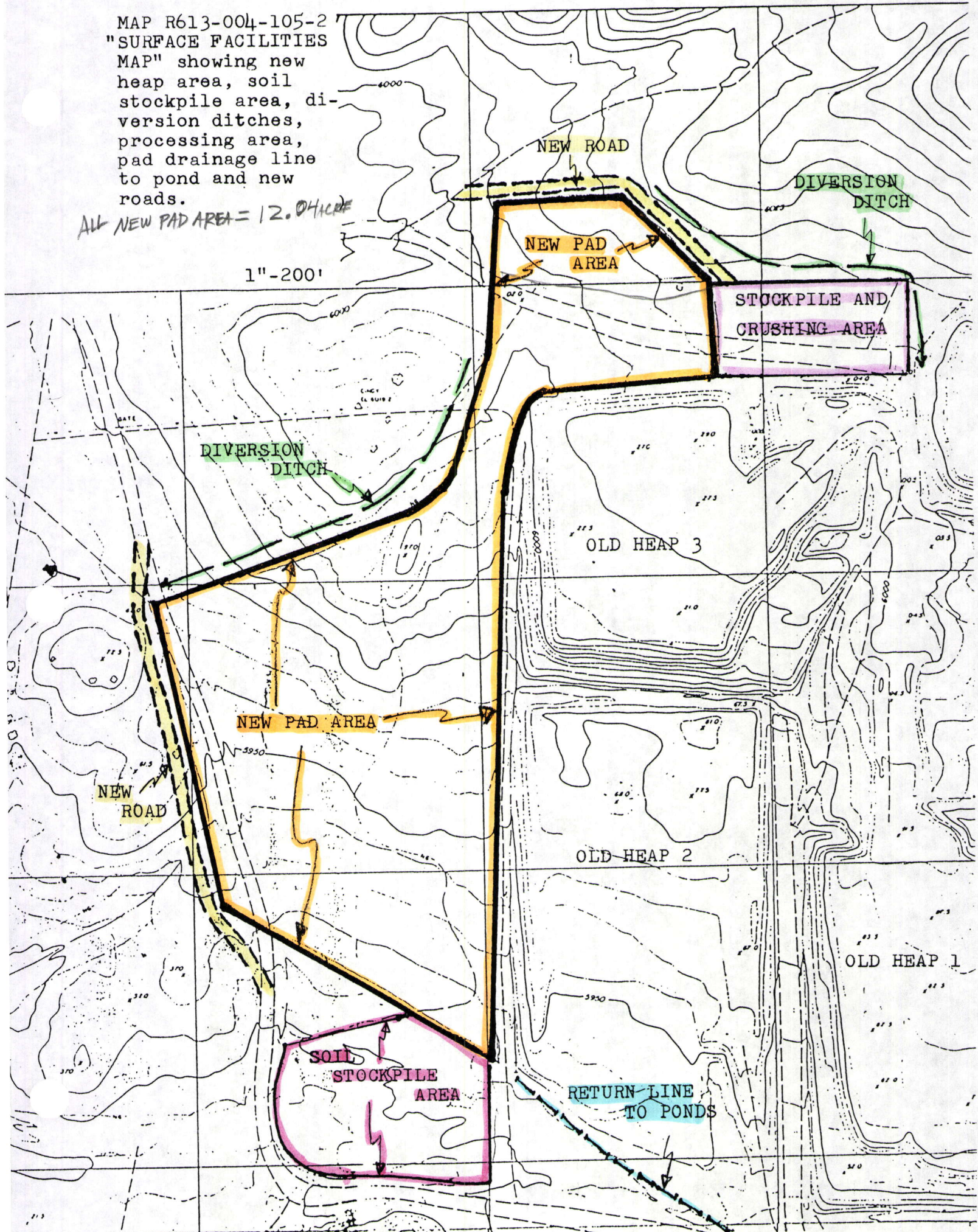
1"-200'



MAP R613-004-105-2
 "SURFACE FACILITIES
 MAP" showing new
 heap area, soil
 stockpile area, di-
 version ditches,
 processing area,
 pad drainage line
 to pond and new
 roads.

ALL NEW PAD AREA = 12.04 ACRES

1"=200'



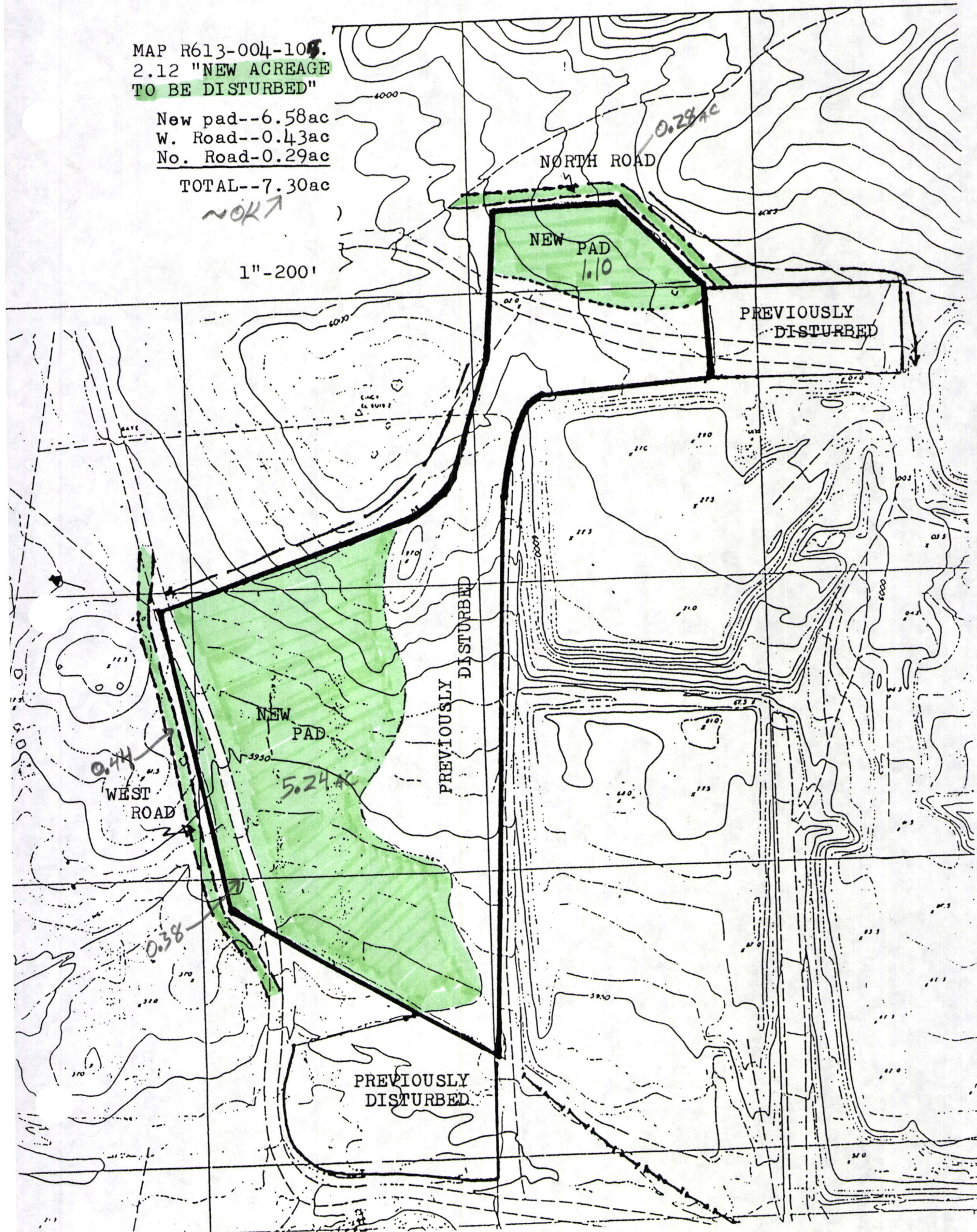
MAP R613-004-104.
2.12 "NEW ACREAGE
TO BE DISTURBED"

New pad--6.58ac
W. Road--0.43ac
No. Road--0.29ac

TOTAL--7.30ac

~OK~

1"-200'



This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number MO270007 Mine Name Drum Mine
Operator Western State Minerals Date March 15, 1991
TO _____ FROM _____

☐ CONFIDENTIAL ☐ BOND CLOSURE ☐ LARGE MAPS ☒ EXPANDABLE
☐ MULTIPLE DOCUMENT TRACKING SHEET ☐ NEW APPROVED NOI
☐ AMENDMENT ☐ OTHER Binder

Description

YEAR-Record Number

☐ NOI ☒ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

Notice of Intention

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superseded

☐ TEXT/ 8 1/2 X 11 MAP PAGES ☐ 11 X 17 MAPS ☐ LARGE MAP

COMMENTS: _____

CC: _____